Barbara Benge
Assistant Chief
Regulatory Division
US Army Corps of Engineers
Walla Walla District
Walla Walla, WA 99362-9265

March 16, 2005

RE: Wetland Bank Prospectus
Boise River Wetlands Trust Wetland Bank

Dear Barbara:

Enclosed is a prospectus for the proposed Boise River Wetlands Trust wetland bank.

This prospectus has been prepared in accord with the direction provided by the document titled *The US Army Corps of Engineers Guidance for Wetland and Stream Mitigation and Mitigation Banking in the Omaha District* (Lawrence et al. 2003) and conforms and complies with that document. It also conforms to the verbal guidance provided by the Assistant Chief, Regulatory Division, US Army Corps of Engineers (COE) - Walla Walla District.

Please review the document and provide comment at your earliest convenience, prepare and publish the public notice, and initiate the process of forming a wetland banking review team.

Sincerely,
Ecological Design, Inc. by

Robert B. Tiedemann CPWS, CWD, CFS, CWB
Principal

Encl.

cc. Roger Anderson
Cornel Larson
Bill McKlveen

PROSPECTUS FOR THE PROPOSED BOISE RIVER WETLANDS BANK
US ARMY CORPS OF ENGINEERS
WALLA WALLA DISTRICT

BOISE RIVER WETLANDS TRUST
ADA COUNTY, IDAHO

MARCH 16, 2005

Prepared by:
Ecological Design, Inc.
Boise, Idaho
Robert B. Tiedemann, CPWS, CWD, CFS, CWB

Prepared for:
US Army Corps of Engineers
Walla Walla District

Roger Anderson
Boise River Wetlands Trust

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INTRODUCTION

This prospectus is to introduce you to the place and persons involved in the proposed Boise River Wetlands Trust wetland bank and the institutional arrangements we propose to implement our plan. Upon its acceptance it will be followed by an invitation from the US Army Corps of Engineers (COE) for Federal and State of Idaho, resource and regulatory agencies and local governments to participate in the process of developing a formal memorandum of agreement know as the Wetland Banking Instrument for the project.

The proposed Boise River Wetlands Trust wetland bank is located in southwest Idaho in Ada County between the cities of Eagle and Star. It is in the midst of one of the fastest growing urban areas of the Intermountain West, where appropriate and practicable wetland compensation sites are increasingly difficult to locate. The project area is approximately 270 acres in size and includes cultivated agricultural ground and undeveloped rolling terrain that has been previously grazed by livestock. Approximately 1.25 miles of the Boise River meanders through the proposed wetland bank. It has a high potential for restoration, in part, because it is adjacent to the river channel and is largely within the 100 year floodway and flood fringe of the Boise River. The enclosed maps and aerial photographs provide additional information to assist you in knowing more about the project area and its character.

The advantages to the public of developing wetland compensation prior to the time it is required as a condition of approval for a Clean Water Act §404 permit are well known and documented in the literature. They include: (1) early development of wetland compensation, thereby avoiding temporal losses, (2) assurances constructed compensation is fully functioning as compared to the uncertainties of a paper plan, and (3) the ability to locate a large block of wetland compensation at an appropriate position within the landscape as compared to force fitting it into numerous, scattered, and unrelated locations.

Those advantages also include benefits to Federal and State of Idaho, resource and regulatory agencies and local governments that include a reduction in professional time required to: (1) review Joint Applications for Permits and plans and specifications for construction of compensatory wetlands, (2) inspect compensatory wetlands during the time of construction, and (3) review and analyze monitoring data to determine if performance standards for compensatory wetlands have been met.

The time resource professionals and the public commit to assisting us develop and implement a successful wetland banking program in the Boise River watershed can benefit our natural resources and free staff for more critical tasks important to the mission of their agency or organization.

PERSONNEL INVOLVED IN THE PROJECT

The persons who will work with you to develop the proposed Boise River Wetlands Trust Wetland Banking Instrument include the following professionals:

Roger Anderson, Owner and General Partner of Sundance Investments, Limited Partnership ("Sundance") is a permanent resident of Ada County, Idaho. Sundance presently owns in fee simple the property on which the Boise River Wetlands Trust wetland bank is located and has interests in adjoining properties that could be later added to the project area. Sundance and Roger have the financial resources and personal commitment to make this project a success. Roger will provide the project team first hand knowledge of the landscapes and history of the project area and will fully participate in all negotiations leading to the Wetland Banking Instrument. Sundance is the sponsor of the wetland bank that will ultimately be maintained and preserved by Boise River Wetlands Trust.

Robert B. Tiedemann, CPWS, CWD, CFS, CWB, Principal, Ecological Design, Inc. is a nationally recognized ecologist. He is a Certified Professional Wetland Scientist (CPWS), Certified Wetland Delineator (CWD), Certified Fisheries Scientist (CFS), and Certified Wildlife Biologist (CWB). Rob served as chairperson for the National Academy of Science - Transportation Research Board committee for investigating the use of remote sensing and other technologies for the identification and classification of wetlands. His work has been recognized by the Federal Highway Administration, Idaho Division Office with their Environmental Excellence Award (March 1997). He has been featured in the Idaho Public Television production Idaho Outdoors. Rob is one of the principal authors of the Boise River System Ordinance, a past member of the Boise River 2000 Advisory Council, and a contributor to the comprehensive plans of the cities of Boise and Eagle.

Rob's efforts to develop and use wetland banks as a mitigation alternative earned him the 1990 US Environmental Protection Agency / Environmental Law Institute - National Wetlands Newsletter annual award for outstanding individual contribution to wetland conservation. He is the principal author of the Idaho Interagency Wetland Banking Agreement (1985) and the State of Washington Wetland Compensation Bank Program Memorandum of Agreement (1988). Rob will assist the US Army COE in facilitating negotiations leading to the Wetland Banking Instrument, serve as principal author of the document, provide scientific support, and ensure compliance with guidance provided by Federal and State of Idaho resource and regulatory agencies.

Cornel Larson, Principal, Larson Architects, PA is an established architect in Southwest Idaho and a project manager for Sundance. Cornel and Roger have led complex projects involving both the built community and sensitive natural resources including the Silverstone development at Eight Mile Creek and Banbury Golf Course near the Boise River. Cornel and Roger will coordinate the activities of the project team.

William J. McKlveen, Partner, Eberle, Berlin, Kading, Turnbow, McKlveen and Jones Chartered is an acknowledged expert in corporate and contract law. Bill serves as legal counsel for Sundance and is knowledgeable and experienced in the development of conservation easements and other legal documents required by the project. Bill will participate in select activities during the development of the Wetland Banking Instrument.

LOCATION AND BOUNDARIES

The project area is located in Sections 15 and 16 T4N R1W of southwest Idaho within the corporate limits of Ada County, both within and outside the 100 year floodplain of the Boise River between River Mile 35.5 and 36.5.

Local landmarks that locate its approximate limits include State Highway 44 (a.k.a. State Street) to the north, the corporate limits of the City of Star to the west, the Eureka Canal to the south, and scattered farm and single family residences to the east.

REVIEW OF THE LITERATURE

The project area and adjacent ground were previously farmed and grazed beginning with the settlement of the Treasure Valley. The Pioneer, Lawrence-Kennedy, Eureka, and Phyllis canals historically delivered irrigation water to cultivated fields and open pastures during the growing season and stock water throughout the year. They continue to operate for customers that now include commercial farm and livestock operations, hobby farms, and scattered residences. Debris and sediment are repeatedly removed from and deposited adjacent to these waterways by the irrigation districts that own and operate them.

Examination of data from the following sources show portions of the project area have wetland characteristics as defined by the US Army COE, and suggest they perform wetland functions and have wetland values (see Figures 1 - 5 and Appendix 1). Adjacent areas appear as uplands with the potential to be developed as wetlands.

1. Star, Idaho quadrangle map, 7.5 minute series (US Geologic Survey 1976).
2. National Wetlands Inventory Star, Idaho orthophoto quadrangle map, 7.5 minute series (US Fish and Wildlife Service 1987).
3. Flood Insurance Rate Map, Ada County, Idaho, Map Number 160001C0130 H and Map Number 160001C0140 H (Federal Emergency Management Agency 2003).
4. Soil Survey of Ada County Area, Idaho (US Department of Agriculture - Soil Conservation Service 1980).
5. Color aerial orthophotography available from Community Planning of Southwest Idaho (COMPASS 2003).
6. A detailed topographic survey completed by Toothman-Orton Engineering Company for Roger Anderson (2004)

The USGS quadrangle map identifies the Boise River as the prominent surface water feature within the project area that separates cultivated agricultural land north of the river from formerly grazed bottomland south of the river. The channel meanders in a broad, looping pattern and shows evidence of periodically changing location and direction of flow.

Other waterways north of the Boise River are the Lawrence Kennedy Canal and Pioneer Canal that generally flow east to west through ground that is regularly planted to corn, alfalfa, and other forage crops. The Lawrence Kennedy Canal receives water from the Pioneer Canal that is diverted from the North Channel of the Boise River at Eagle Island. Leakage from an artesian well contributes additional water to the ground surface in a confined portion of the project area.

Other waterway south of the Boise River are two unnamed, high flow channels; an abandoned meander of the Boise River; and an unnamed, constructed ditch that conveys water received from the Phyllis Canal and diverted from the Boise River, downstream from Eagle Island. Surface water stands in this ditch throughout the seasons when irrigation water is no longer applied to adjacent agricultural land suggesting it intercepts the local groundwater piezometric surface. It lies just south of and outside of the project area.

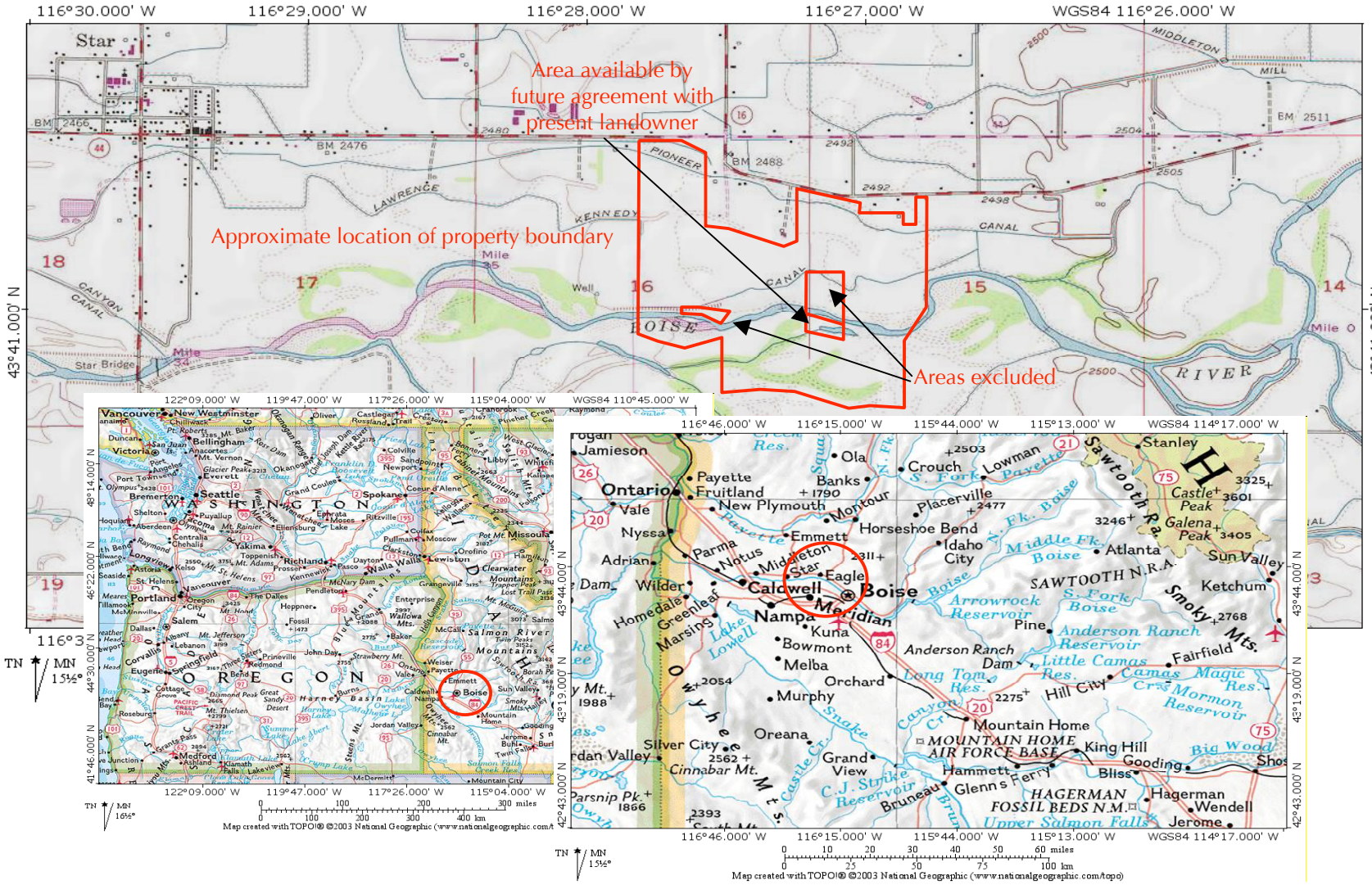


Figure 1 – Regional, Vicinity, and USGS Quadrangle Maps
Boise River Wetlands Trust
Wetland Bank
Ada County, Idaho

Ecological Design, Inc.
March 16, 2005

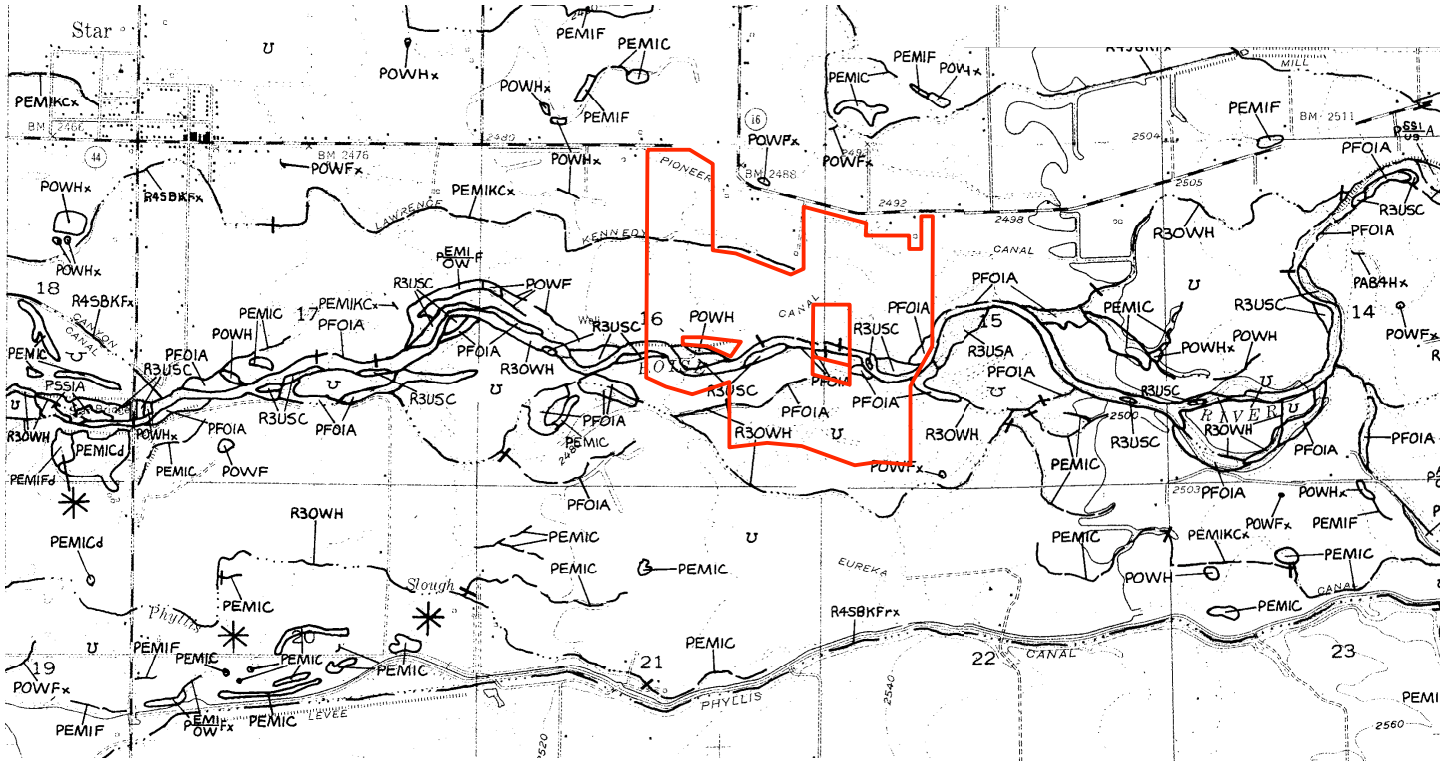


Figure 2 – US FWS National Wetlands Inventory Map
Boise River Wetlands Trust
Wetland Bank
Ada County, Idaho

Ecological Design, Inc.
March 16, 2005

N

Not to Scale

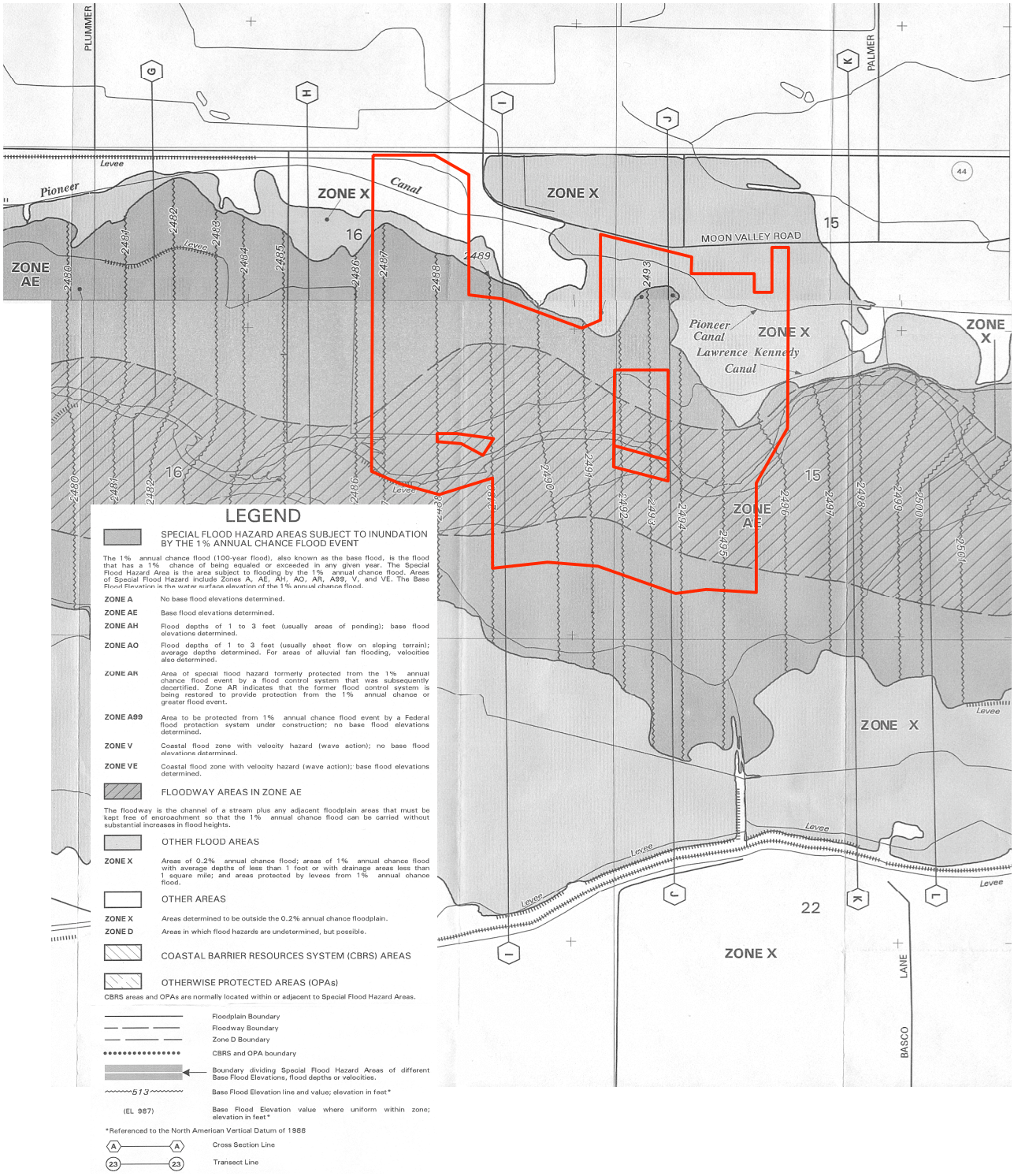
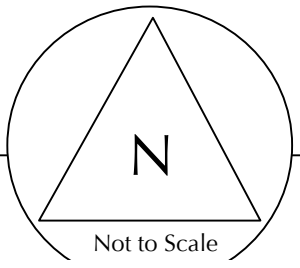


Figure 3 – FEMA Flood Insurance Rate Map (2003)
Boise River Wetlands Trust
Wetland Bank
Ada County, Idaho

Ecological Design, Inc.



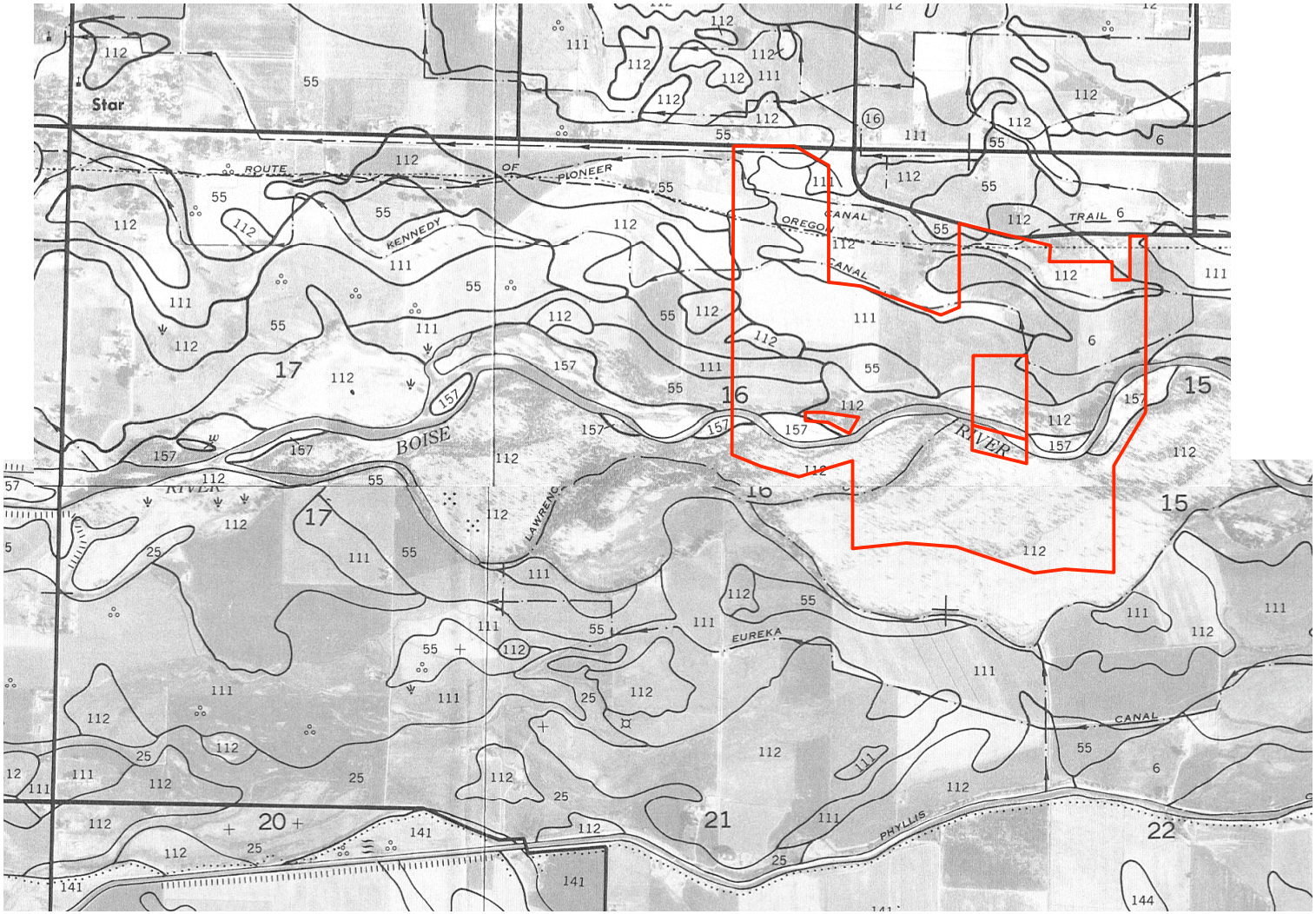


Figure 4 – USDA Soil Survey Map
Boise River Wetlands Trust
Wetland Bank
Ada County, Idaho

Ecological Design, Inc.
March 16, 2005

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Not to Scale

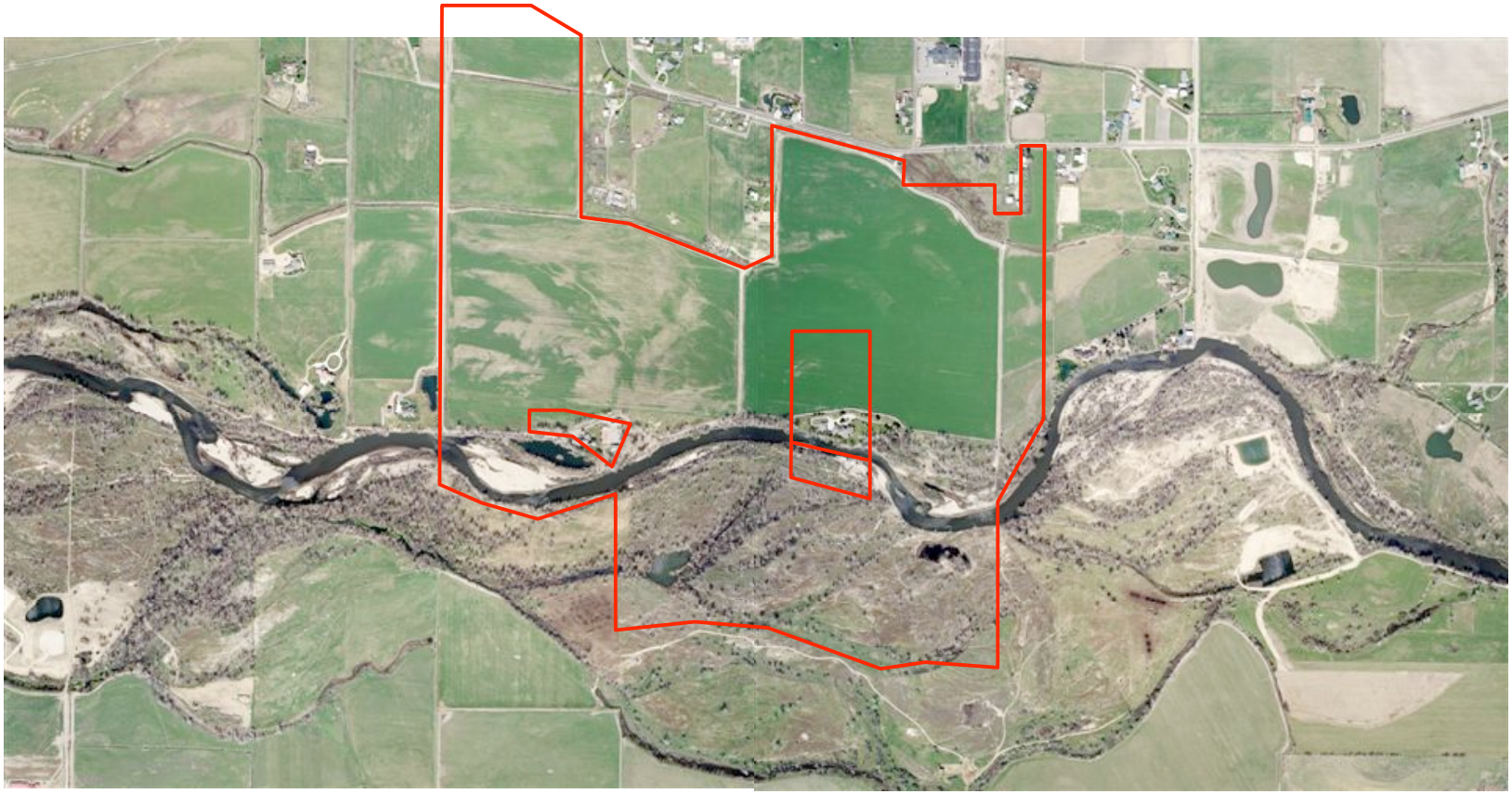


Figure 5 – Color Aerial Photography (2003)
Boise River Wetlands Trust
Wetland Bank
Ada County, Idaho

Ecological Design, Inc.
March 16, 2005

N

Not to Scale

The US FWS National Wetlands Inventory map shows wetlands associated with the Boise River, the Lawrence Kennedy Canal, the abandoned meander of the Boise River; and the unnamed, constructed ditch. The channel and adjacent shorelines of the Boise River are classified by the US FWS National Wetlands Inventory as riverine, upper perennial, open water, permanently flooded (R3OWH) and riverine, upper perennial, unconsolidated shore, seasonally flooded (R3USC) wetlands. Narrow forested corridors of black cottonwood (*Populus trichocarpa*) grow upslope of these shorelines and in a mosaic composed of several isolated blocks of trees with closed canopies. Both are classified as palustrine, forested, broad leaved deciduous, temporarily flooded (PFO1A) wetlands. A small pond adjacent to and hydraulically connect to the channel is classified as palustrine, forested, open water, permanently flooded (POWH) wetland.

The stands of herbaceous vegetation that grow along the margins of the Lawrence Kennedy Canal are classified by the US FWS National Wetlands Inventory as palustrine, emergent, persistent, artificially flooded, seasonally flooded, excavated (PEM1KCx) wetland. The narrow forested corridor of black cottonwood growing in the abandoned meander of the Boise River is classified as palustrine, forested, broad leaved deciduous, temporarily flooded (PFO1A) wetland. Standing water areas within the abandoned meander and the unnamed, constructed ditch are classified as riverine, upper perennial, open water, permanently flooded wetland (R3OWH).

The FEMA FIRM (2003) identifies and locates a 100-year floodplain within the project area, including the floodway and flood fringe. The floodway is that area of the river channel and floodplain that must be maintained free of encroachments to convey the 100 year flood event without increasing the water surface elevation more than one foot. The floodway fringe is that area of the floodplain that may be obstructed and still allow the river to convey the 100 year flood event without increasing the water surface elevation more than one foot (Federal Emergency Management Agency 1991). Swift moving water in the floodway and standing or slow moving water in the floodway fringe is likely during the 100 year flood event. It has a 100% probability of occurring once every 100 years or a 1% probability of occurring in any given year.

A broad floodway closely parallels the channel of the Boise River throughout the width of the project area. Its boundaries are approximately of equal distance from the channel, both north and south of the river. The boundaries of an even wider floodway fringe are more irregular than those of the floodway and generally farther away from the channel south of the river, as compared to north of the river. The 500-year floodplain extends from State Highway 44 (a.k.a. State Street) to the Phyllis Canal, beyond the limits of the project area.

The USDA-SCS soil survey for Ada County identifies and describes soils within the project area (see Table 1). They are generally characterized as very deep, sandy loam and gravelly loamy course sand, formed from igneous alluvium on the floodplain and terraces of the Boise River. The soils are subject to "hazard of flooding " and "wetness".

The publication *Hydric Soils of the State of Idaho 1985* (USDA-SCS 1985) identifies only Baldock, Typic Haplaquepts as hydric. It does not identify any of the remaining soil types as hydric. Most importantly, they do not meet any of the hydric soil criteria including “soils in Aquic suborders, Aquic subgroups, Albolls suborder, Salorthids great group, or Pell great groups of Vertisols that are (a) somewhat poorly drained and have a water table less than 0.5 feet from the surface at some time during the growing season if permeability is equal to or greater than 6.0 inches per hour in all layers within 20 inches, or (b) poorly drained or very poorly drained and have a water table at less than 1.5 feet from the surface at some time during the growing season if permeability is less than 6.0 inches per hour in all layers within 20 inches .“

Table 1 - Soils Within the Project Area and their Characteristics

Symbol	Soil Map Unit Name	Soil Description	Depth to Seasonal High Water Table
6	Baldock loam	Poorly drained, moderately rapid permeability.	2.0 - 3.0 feet during the irrigation season
55	Falk fine sandy loam	Somewhat poorly drained, moderately rapid permeability.	3.0 - 5.0 feet during the irrigation season
111	Moulton fine sandy loam	Poorly drained, moderately rapid permeability.	1.5 - 3.0 feet
112	Notus soils	Somewhat poorly drained, moderately rapid permeability.	3.0 - 5.0 feet
157	Riverwash	Frequently flooded, washed, and reworked.	-

Color aerial photography taken in April, 2003 shows textures, colors, and patterns characteristic of stream channels and wetlands that are both relics of the past and persistent features on the existing landscape. A sinusoidal, meandering line - traversing east to west - that is the active channel of the Boise River is colored black where deep, water pools are located and shades of grey where riffles occur. Adjacent portions of the channel that are colored light tan are inundated with a frequency and duration to preclude the growth of vegetation. North of the Boise River where ground is cultivated, soils transported and sorted by high flow river events are shown by the dark tan color and arched shape of areas of sparse growth as compared to light green areas of lush growth of planted crops. South of the Boise River where ground was previously grazed, arched shaped corridors colored brown and with a nubby texture, are evidence of woody vegetation growing along river meander scars.

Collaboration of this information with the evidence provided by updates and photorevisions of the USGS quadrangle maps (which show the changing locations of the Boise River and unnamed waterways), FEMA FIRM maps (which shown the presence of a regulated floodplain), and the soil survey (which shows the presence of hydric soils and soils formed on low alluvial terraces) support the suspicion that the locations of wetlands on the floodplain of the Boise River have periodically changed prior to flow regulation by the three upriver dams (i.e. Arrowrock, Anderson Ranch, and Lucky Peak). Flows that exceed bank full capacity (i.e. > Q2 event) which are capable of scour and deposition, thereby creating wetlands, no longer occur.

Game and non-game wildlife species known to occur in the Boise River corridor in habitat provided by wetlands and the floodplain are summarized in Table 2.

Table 2 - Species of Reptiles, Amphibians, and Mammals Known to Occur within the Boise River Corridor in Wetlands and the Floodplain.

Reptiles:

1. western skink (*Eumeces skiltonianus*)
2. western terrestrial garter snake (*Thamnophis elegans*)
3. common garter snake (*Thamnophis sirtalis*)

Amphibians:

1. western toad (*Bufo boreas*)
2. Pacific tree frog (*Hyla regilla*)
3. striped chorus frog (*Hyla triseriata*)
4. Great Basin spadefoot (*Scaphiopus intermontanus*)
5. northern leopard frog (*Rana pipiens*)
6. spotted frog (*Rana pretiosa*)

Mammals:

1. vagrant shrew (*Sorex vagrans*)
2. western pipistrelle (*Pipistrellus hesperus*)
3. nutall's cottontail (*Sylvilagus nutallii*)
4. beaver (*Castor canadensis*)
5. deer mouse (*Peromyscus maniculatus*)
6. meadow vole (*Microtus pennsylvanicus*)
7. muskrat (*Ondatra zibethica*)
8. western jumping mouse (*Zapus princeps*)
9. porcupine (*Erethizon dorsatum*)
10. raccoon (*Procyon lotor*)
11. ermine (*Mustela erminea*)
12. striped skunk (*Mephitis mephitis*)
13. red fox (*Vulpes vulpes*)
14. mule deer (*Odocoileus hemionus*)

(Source: Groves and Marks 1985)

The Boise River below Barber Dam contains populations of rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), mountain whitefish (*Prosopium williamsoni*), and rough fish including suckers (*Catostomus macrochielus*), chiselmouth chub (*Arocheilus alutaceus*), and northern squawfish (*Ptychocheilus oregonensis*) (Allen 1995).

Bald eagle (*Haliaeetus leucocephalus*) is the only Federally listed threatened or endangered species known to occur in the project area. Great blue heron (*Ardea herodias*) is the only species of special concern. A rookery is located near the southwest boundary, just outside of the project area.

PRELIMINARY DELINEATION OF WETLANDS AND OTHER JURISDICTIONAL WATERS OF THE UNITED STATES

Anecdotal Information, Observations Within the Project Area, and Results of Field Studies

Waterways and wetlands were identified, classified, and located by a review of information readily available from the published literature including maps, surveys, and aerial photography.

Vegetation communities were casually observed and plant species identified during field reviews conducted by Rob Tiedemann, Ecological Design, Inc. on May 13 and August 30, 2004 of the project area and surrounding portions of the property. All portions of the proposed wetland bank were observed on the ground. Photo documents of representative plant communities and their position within the landscape were made for select locations. Samples of plant materials were collected, stored in plastic bags, and archived.

Aerial photography available from the USDA Natural Resources Conservation Service (USDA-NRCS 2004), US Army COE (August 1992), and Community Planning of Southwest Idaho (COMPASS 2003) were reviewed and correlated with oblique views on the ground. In addition, aerial photography available from the US Army COE (February 29, 1996) during a full-bank discharge event (i.e. 6,500 CFS) were reviewed to determine the locations of surface water during the Q2 event. Photo-interpretation of this photography shows patterns, textures, and color shades that in combination with ground observations throughout all portions of project area allow us to identify and classify plant cover types and wetlands.

A partial list of species of dominant plants observed during field reviews of the project area and surrounding portions of the property on May 13 and August 30, 2004 is shown in Table 3.

Table 3 – Partial List of Species of Dominant Plants Observed During Field Reviews of the Project Area and Surrounding Portions of the Property on May 13 and August 30, 2004

1. black cottonwood (*Populus trichocarpa*)
2. river birch (*Betula occidentalis*)
3. Douglas hawthorne (*Crataegus douglasii*)
4. Russian olive (*Elaeagnus angustifolia*)
5. chokecherry (*Prunus virginiana*)
6. false indigo (*Amorpha fruiticosa*)
7. coyote willow (*Salix exigiua*)
8. yellow willow (*Salix lutea*)
9. Pacific willow (*Salix lasiandra*)
10. Wood's rose (*Rosa woodsii*)
11. common cocklebur (*Xanthium strumarium*)
12. Louisiana sage (*Artemesia ludoviciana*)
13. purple loosestrife (*Lythrum salicaria*)
14. Kentucky bluegrass (*Poa pratensis*)
15. redtop bentgrass (*Agrostis stolonifera*)
16. quackgrass (*Agropyron repens*)
17. cheatgrass (*Bromus tectorum*)
18. Hooker's evening primrose (*Oenothera hookeri*)
19. Canada goldenrod (*Solidago canadensis*)
20. green rabbitbrush (*Chrysothamnus viscidiflorus*)
21. common mullein (*Verbascum thapsus*)
22. white goosefoot (*Chenopodium album*)
23. broad leaved cattail (*Typha latifolia*)
24. Nebraska sedge (*Carex nebrascensis*)
25. wooly sedge (*Carex lanuginose*)
26. spikerush (*Eleocharis palusris*)
27. scouring rush (*Equisetum hyemale*)

A definitive delineation and classification of wetlands – normally accomplished as part of the pre-application for permits process – requires use of the onsite inspection method prescribed by the Corps of Engineers Wetlands Delineation Manual - Technical Report Y-87-1 (a.k.a. 1987 Manual) (Environmental Laboratory 1987), and the classification system described in Classification of Wetlands and Deepwater Habitats (Cowardin et al. 1979). Vegetation, soils, and hydrology data generated by the use of the routine onsite inspection method are used to delineate wetlands and classify them by system, class, subclass, and water regime. This will be accomplished after the prospectus is accepted and as planning for each phase of the project proceeds.

Description of Interest in Real Property

Sundance is the owner of fee simple interest in the real property.

Legal Description of the Property

A parcel of land lying in the West half of the Northeast Quarter, Southeast Quarter of the Northeast Quarter, North half of the Southeast Quarter and the Southeast Quarter of the Southeast Quarter of Section16, Township 4 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

Beginning at a brass cap marking the North one quarter corner of Section 16, Township 4 North, Range 1 West, Boise Meridian, thence South 00°10'46" East 100.02 feet to a point on the Southerly right of way of State Highway 44 and the real point of beginning; thence South 00°10'46" East 3193.95 feet to a point on the existing Southerly bank of the Boise River; thence along said Southerly bank the following courses and distances:

North 87°05'30" East 177.64 feet;
South 51°55'36" East 259.08 feet;
South 48°48'02" East 186.58 feet;
South 64°17'28" East 192.58 feet;
South 78°57'37" East 111.04 feet;
North 80°12'24" East 170.55 feet;
North 69°11'48" East 180.08 feet;
North 75°01'49" East 178.21 feet; thence leaving said Southerly bank and proceeding
South 00°07'28" East 881.09 feet; thence
South 68°30'00" East 349.69 feet; thence
North 65°00'00" East 508.52 feet; thence
North 00°04'41" West 1063.53 feet to a point on the Southerly bank of the Boise River; thence
North 00°04'41' West 1222.08 feet; thence
North 86°42'17" West 261.17 feet; thence
North 00°12'17" West 285.57 feet; thence
North 73°28'36" West 550.55 feet; thence
North 85°31'30" West 336.19 feet; thence
North 00°07'28" West 1331.78 feet to a point on the Southerly right of way of State Highway 44; thence along said Southerly right of way the following courses and distances
North 69°40'44" West 360.99 feet to a brass cap;
North 89°47'57" West 258.80 feet to a brass cap; thence Northwesterly 382.73 feet along a curve left on said right of way, having a radius of 112,205.05 feet a central angle of 00°23'28" and a long chord which bears North 89°53'50" West 382.73 feet to the REAL POINT OF BEGINNING.
(Approximately 143 acres)

EXCEPT a parcel of land located within the boundaries of the "Record of Survey for James Campbell" filed in the Book D, Page 145, Records of Ada County, Idaho, said survey is located in the East half of Section 16, Township 4 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

Commencing at the North quarter corner of Section 16, Township 4 North, Range1 West, Boise Meridian; thence South 00°10'46" East along the North-South midsection line of Section 16, a distance of 3,095.73 feet to a point; thence leaving said midsection line
North 89°49'14" East 892.14 feet to the Point of Beginning; thence
North 67°59'41" East 485.90 feet to a point; thence
North 85°35'30" East 585.00 feet to a point; thence
South 04°24'30" East 111.00 feet to a point; thence
South 64°52'28" West 561.56 feet to a point; thence
South 77°05'27" West 179.41 feet to a point; thence
North 76°16'22" West 366.27 feet to a point; thence
North 02°25'58" West 75.32 feet to the Point of Beginning.
(Approximately 5 acres)
Approximately 137 acres.

AND

PARCEL 1

All of Matt Subdivision, according to the plat thereof, filed in Book 73 of Plats at page 7509 and 7510, records of Ada County, Idaho.

EXCEPT Lot 1 in Block 1.

PARCEL II

That portion of the East half of the Northwest quarter and the East half of the Southwest quarter of Section 15, Township 4 North, Range 1 West, Boise Meridian, Ada County, Idaho, being more particularly described as follows:

Beginning at the quarter section corner between Sections 10 and 15 in Township 4 North, Range 1 West, Boise, Meridian;
Thence South on the quarter section line, 1,000.9 feet to a harrow tooth in road;
Thence turning and angle 89°17′ right, bearing South 89° 17′ West running a distance of 955 feet to an iron bolt, the REAL POINT OF BEGINNING;
Thence continuing South 89° 17′ West 362.3 feet to an iron bolt in the West line of the Northeast quarter of the Northwest quarter of Section 15, Township 4 North, Range 1 West, Boise Meridian;
Thence South on said line, 2,125 feet to a stake in the river bank;
Thence North 73° 19′ East 378.2 feet to a stake;
Thence North parallel with the West line 2,021 feet to the PLACE OF BEGINNING.

A portion of which is known as Matt Subdivision.

EXCEPT Lot 1 in Block 1, Matt Subdivision.

PARCEL III

A parcel of land located in Lot 9 of R.L. Hon Subdivision, filed in Book 4 of Plats at page 163, Ada County Recorder; the Southwest quarter of the Northwest quarter of Section 15, Township 4 North, Range 1 West, Boise Meridian, a part of Government Lot 4 of Section 15, Township 4 North, Range 1 West, Boise Meridian; and a part of the East half of the East half of Section 16, Township 4 North, Range 1 West, Boise Meridian, more particularly described as follows:

Commencing at the Northwest corner of said Section 15, monumented with a brass cap on the Northerly right-of-way of State Highway 44;
Thence South 0° 39′51″ West 970.45 feet along the West boundary of said Section 15 to a point on the Southerly right-of-way of Moon Valley Road as delineated on the ground by brass cap right of way monuments to the POINT OF BEGINNING;
Thence North 74° 38′38″ West 301.11 feet along said Southerly right of way to a point;
Thence leaving said Southerly right of way South 0° 39′51″ West 957.73 feet to a point being the Southeast corner of that certain tract of land described in Deed of Trust recorded July 21, 1986 under Instrument No. 8640903;
Thence North 79° 53′47″ West 505.28 feet (of record as 503.99 feet) along the South line of said tract of land to the East line of that certain tract of land conveyed to Hall, by Deed recorded in Book 61 of Deeds at Page 150;
Thence South 0° 39′51″ West 288.65 feet along said East line to a point;
Thence North 89° 20′09″ East 264.00 feet along said Hall Tract to a point;
Thence South 1° 11′41″ West 1229.07 feet along said East line of Hall Tract to a point established in Judgment under District Court Case No. 49243;
Thence South 0° 52′25″ West 1063.53 feet to a point on the old U.S. Government Meander Line;

Thence along the old U.S. Government Meander Line the following described courses:
Thence North 65° 57′06″ East 455.08 feet to a point;
Thence North 35° 27′06″ East 198.00 feet to a point;
Thence South 45° 12′24″ East 293.86 feet to a point;
Thence North 71° 53′41″ East 334.34 feet to a point;
Thence South 20° 21′09″ East 583.30 feet to a point;
Thence South 78° 20′44″ East 493.42 feet to a point;
Thence South 47° 13′44″ East 134.99 feet (of record as 132.08 feet in the Judgment established under District Court Case No. 49243) to a point on the Easterly boundary of said Government Lot 4;
Thence leaving said U.S. Government Meander Line North 0° 57′41″ East 2176.25 feet along said Easterly boundary of Government Lot 4 to the Southeast corner of said Southwest quarter of the Northwest quarter;
Thence along the Easterly boundary of said southwest quarter of the Northwest quarter North 0° 45′06″ East 1320.93 feet to the Northeast corner of said Southwest quarter of the Northwest quarter;
Thence along the Northerly boundary of said Southwest quarter of the Northwest quarter North 89° 09′13″ West 659.96 feet to the Southeast corner of said Lot 9 of R.L. Hon Subdivision;
Thence along the Easterly boundary of said Lot 9 North 0° 42′29″ East 225.45 feet to a point on the Southerly right of way of Moon Valley Road as delineated on the ground by Department of Public Works brass cap monuments;
Thence along said Southerly right of way the following described courses;
Thence South 86° 47′51″ West 61.28 feet;
Thence 184.80 feet along the arc of a 533.00 foot radius curve right, said curve having a central angle of 19° 51′56″, a long chord of 183.88 feet and a long chord bearing of North 83° 11′44″ West;
Thence North 73° 15′35″ West 137.43 feet to a point;
Thence North 74° 38′38″ West 293.69 feet to the POINT OF BEGINNING.

LESS AND EXCEPTING THEREFROM that portion of said property located in Matt Subdivision, filed in Book 73 of Plats at pages 7509 and 7510, official records of Ada County, Idaho.
(Approximately 148.88 acres)

EXCEPT FOR:

A parcel of land located in the SW _ of the NW _, and the NW _ of the SW _ of Section 15; and the NE _ of the SE _, and SE _ of the NE _ of Section 16, all in Township 4 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

COMMENCING at the corner common to Sections 9, 10, 15 and 16, Township 4 North, Range 1 West, Boise Meridian, Ada County, Idaho, from which corner the _ corner of said Sections 10 and 15 bears S.89°06′20″E., 2643.84 feet; thence, southerly, along the line common to said Sections 15 and 16,

A.) S.00°39′51″W., 2322.24 feet to the POINT OF BEGINNING; thence,

1.) S.89°20′09″E., 604.57 feet; thence along a line parallel with the line common to said Sections 15 and 16, the following courses;
2.) S.00°39′51″W., 323.26 feet to the southerly line of said NW _ of Section 15; thence, continuing,
3.) S.01°16′57″W., 935.93 feet; thence, leaving said line,
4.) N.80°03′48″W., 169.90 feet; thence,
5.) N.81°08′26″W., 171.29 feet; thence,
6.) N.88°29′02″W., 121.80 feet; thence,
7.) N.64°09′38″W., 159.41 feet to the line common to said Sections 15 and 16, from which an aluminum cap monument, marking meander corner #706 as shown on Record of Survey No. 1216, records of Ada County, Idaho, bears S.01°16′57″W., 537.35 feet; thence,
8.) N.79°28′14″W., 124.12 feet; thence, along a line parallel with the line common to said Sections 15 and 16, the following courses:

9.) N.01°16'57"E., 794.78 feet to the northerly line of said SE _ of Section 16; thence, continuing,
10.) N.00°39'51"E., 321.72 feet; thence, leaving said line,
11.) S.89°20'09"E., 122.51 feet to the POINT OF BEGINNING.

(Approximately 20.00 acres)
Approximately 128.88 acres

Total acreage: approximately 265.88 acres

Description of the Project Type

The Boise River Wetland Bank is a privately owned and operated limited liability corporation with wetland banks credits and professional expertise available to public, private, and non-profit institutions and individuals. Potential clients include, but are not limited to Federal, State of Idaho, and local land management and transportation agencies; special use districts and taxing authorities recognized by the State of Idaho (e.g. flood control, irrigation, and drainage districts); public and privately owned utilities; land developers; agricultural and ranching operations; and land trusts and other 501(c)3 organizations.

Goals and Objectives

Goal

The goal of the Boise River Wetland Bank is to provide appropriate and practicable compensation for unavoidable adverse impacts to waters of the United States within its service area after all appropriate and practicable measures to avoid, minimize, and repair and restore unavoidable adverse impacts have been exhausted by the Clean Water Act §404 permit applicant.

Objectives

The objectives of the Boise River Wetland Bank are: (a) to achieve this goal by the measures described in this prospectus so that an equivalent quality and quantity of wetland functions and values are provided by the sum of restoration, creation, and preservation efforts, (b) to achieve this goal in an efficient and cost effective manner, and (c) to demonstrate the likelihood of success by generating data according to a monitoring plan and comparing measurable results to a quantitative performance standard.

Method of Producing Credits

Wetland bank credits will be produced by restoration of existing, degraded wetlands; construction of new wetlands in areas that are formally delineated as uplands; preservation of wetland buffers; and preservation of that reach of channel of the Boise River within the Boise River Wetland Bank project area.

Description of Credit Assessment Methods

Credits will be assessed and measured at the Boise River Wetland Bank by methods that are current and customary practices of the US Army COE - Walla Walla District. The unit of measure of credits is square feet and/or acres of wetland categorized by ecological system, sub-system, class, and sub-class as defined by Cowardin et al. (1979). Debits will be assessed and measured at the site of the wetland impact by the same methods as those used at the Boise River Wetland Bank.

Square feet and/or acres of wetland credits will generally be traded for acres of wetland debits that are of the same ecological system, sub-system, class, and sub-class as defined by Cowardin et al. (1979). Deviations from this will be allowed on a case-by-case basis and by mutual agreement between Boise River Wetlands Trust and the US Army COE - Walla Walla District.

Other methods of assessment may be used to more accurately assess wetland functions and values, and modify the strict use of acres as the unit of measure. This will occur only by mutual agreement between the creditor (i.e. Boise River Wetlands Trust), the debtor (i.e. Clean Water Act §404 permit applicant and purchaser of credits), and the US Army COE - Walla Walla District.

Other methods of assessment include, but are not limited to the Hydrogeomorphic Approach (HGM) developed by the US Army COE as described in the following:

> A Regional Guidebook for Applying the Hydrogeomorphic Approach to Assessing Wetland Functions of Riverine Floodplains in the Northern Rocky Mountains (Hauer, F.R. et al. 2002)
>
> An Approach for Assessing Wetland Functions Using Hydrogeomorphic Classification, Reference Wetlands, and Functional Indices, Wetlands Research Program Technical Report WRP-DE-9, (Smith, R. D. et al. 1995)
>
> A Guidebook for Application of Hydrogeomorphic Assessments to Riverine Wetlands, Wetlands Research Program Technical Report WRP-DE-1 (Brinson, M. M. et al. 1995)
>
> A Hydrogeomorphic Classification for Wetlands, Wetlands Research Program Technical Report WRP-DE-4 (Brinson, M. M. 1993)

Qualitative and Quantitative Description of Credits

A qualitative description and quantitative estimate of credits established by restoration of existing, degraded wetlands; construction of new wetlands in areas that are formally delineated as uplands; preservation of wetland buffers; and preservation of that reach of channel of the Boise River within the Boise River Wetland Bank project area are shown in Table 3.

Table 3 - Qualitative Description and Quantitative Estimate of Credits

Method of Establishing Credits	Ecological System, Sub-system, Class, and Sub-class	Symbol	Estimate of Acres
Restoration:	palustrine, emergent, persistent	PEM1	27
	palustrine, scrub-shrub, broad leaved deciduous	PSS1	27
	palustrine, forested, broad leaved deciduous	PFO1	3
	riverine, upper perennial, open water	R3OW	3
	riverine, upper perennial, unconsolidated shore	R3US	3
Construction:	palustrine, emergent, persistent	PEM1	15
	palustrine, scrub-shrub, broad leaved deciduous	PSS1	50
	palustrine, forested, broad leaved deciduous	PFO1	70
	riverine, upper perennial, open water	R3OW	3
	riverine, upper perennial, unconsolidated shore	R3US	3
Preservation wetland buffers:	upland	UPL	15
Preservation channel:	riverine, upper perennial, open water	R3OW	2
	riverine, upper perennial, unconsolidated shore	R3US	3

Rational for Crediting

Unavoidable adverse impacts to wetlands will be compensated within the Boise River Wetland Bank at the customary ratios articulated by the US Army COE - Walla Walla District or at the ratios agreed to by the Clean Water Act §404 permit applicant at an early coordination meeting with the US Army COE - Walla Walla District. Those customary ratios currently are: (1) palustrine, emergent wetland at a 1:1 ratio, (2) palustrine, scrub-shrub wetland at a 3:1 ratio, and (3) palustrine, forested wetland at a 5:1 ratio.

Statement of Compliance

This prospectus has been prepared in accord with the direction provided by the document titled *The US Army Corps of Engineers Guidance for Wetland and Stream Mitigation and Mitigation Banking in the Omaha District* (Lawrence et al. 2003) and conforms and complies with that document. It also conforms to the verbal guidance provided by the Assistant Chief, Regulatory Division, US Army COE - Walla Walla District.

General Site Plan

A general site plan showing approximate locations of existing wetlands and potential locations where restoration of existing, degraded wetlands and construction of new wetlands may occur is shown in Figure 6.

Outline of Management and Maintenance Responsibilities

Management and maintenance of the Boise River Wetland Bank will be the responsibility of Boise River Wetlands Trust. Those responsibilities include: (1) providing temporary establishment water for installed seed and container plants, (2) long-term management of quantity and quality of surface and ground water delivered to wetlands, (3) maintenance of fencing and other controls to prevent intrusion by livestock and uninvited persons, (4) inspections to identify trespass and vandalism, (5) monitoring to measure and evaluate function and performance of wetlands and if needed, identify corrective actions, and (6) reporting to the US Army COE and other interested Federal, State of Idaho, and local agencies and franchised entities, organizations, and individuals.

Preliminary Work Plan, Planting Materials and Methods, Schedule of Work, and Operations

Preliminary Work Plan

Restoration of existing, degraded wetlands and construction of new wetlands will be accomplished in accordance with a detailed construction plan, developed after further study, that may include: (1) clearing and grubbing, (2) salvage of plant materials and topsoil, (3) excavation and placement of earth and rock, (4) installation of water control structures to provide the proper hydrology for the germination and growth of black cottonwood seed and to better manage weedy species, (5) installation of seed, cuttings, and container plants of native and naturalized vegetation, and (6) temporary and permanent implementation of best management practices for erosion control.

Planting Materials and Methods

All disturbed ground will be repaired and restored by successful revegetation with the appropriate species, planting methods, and sources of plant materials described in the document titled *Idaho Department of Fish and Game - Region 3 Prescription for Revegetation of Wetlands, Riparian Areas, and Uplands Within a Typical Southwest Idaho Stream Corridor* (Tiedemann 1992) and further articulated in Proposed Special Provisions to the Construction Contract and construction drawings (see Appendix 2). Special attention will be given to plant structure, wildlife value, and the diversity of the plant community.

Schedule of Work

The project will be constructed in phases beginning with the initiation of earthwork and structures for Phase 1 on or around April 2006 and planting in November 2006. The location and schedule for future phases will be determined after monitoring and evaluation of Phase 1.

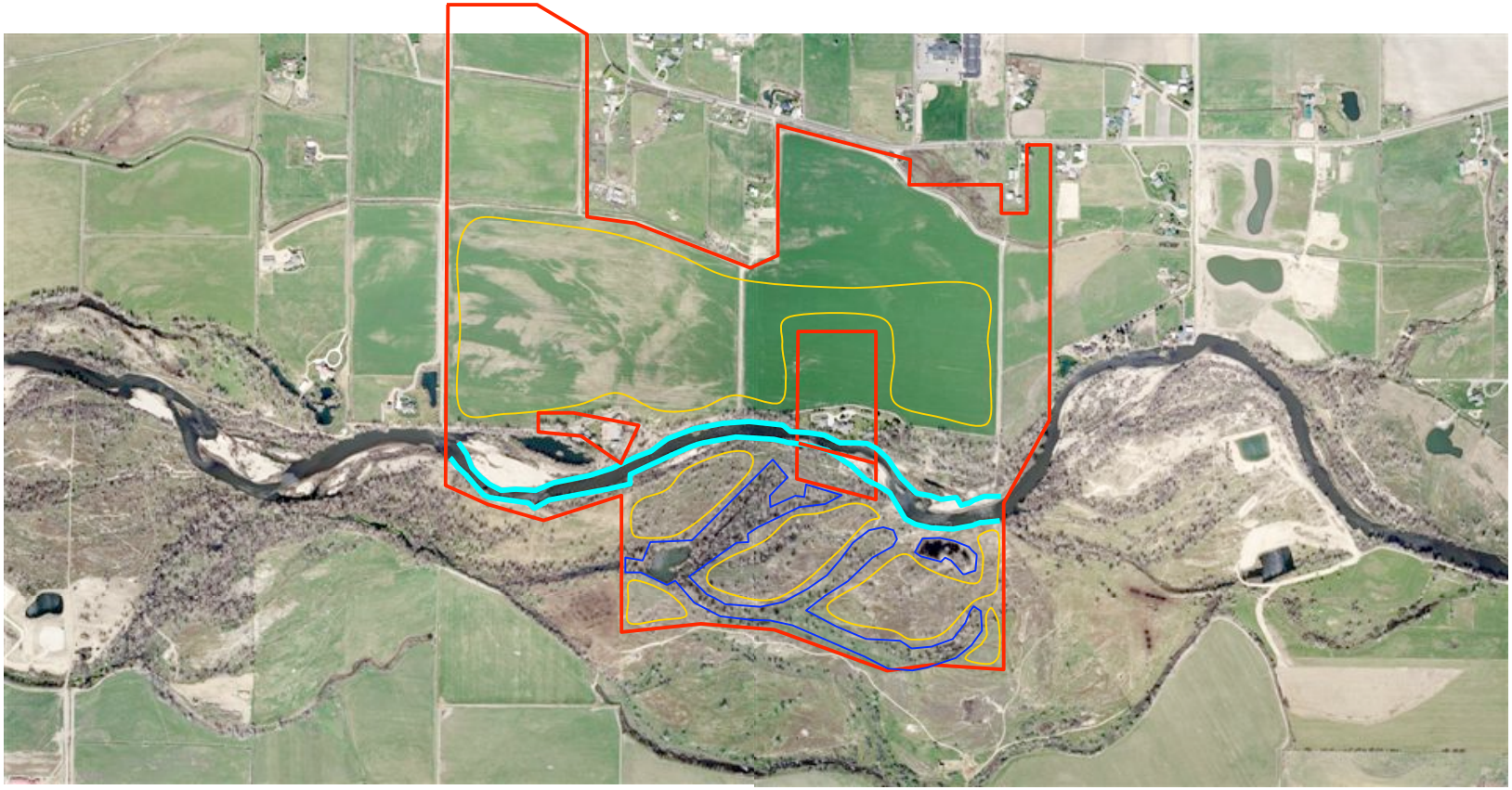
Site Protection and Maintenance

The project area will be protected by Memorandum of Agreement between Sundance; Boise River Wetlands Trust; and the US Army COE or a qualified land trust that is a 501(c)3 organization. If required by Idaho Code as expressed by Idaho Department of Water Resources (IDWR), existing water rights held by Boise River Wetlands Trust will be modified to show a change in beneficial use to allow application of irrigation water to vegetation growing in wetland restoration and compensation areas.

Performance Standards

The standards of performance and measures of success for constructed and restored wetlands are: (1) a minimum of 80% herbaceous cover - as compared to a representative control site - of species of vegetation intentionally installed by seed or of other desirable, native, and naturalized species that may occur by natural means, (2) a minimum 60% survival of installed cuttings and container plants, and (3) absence of weedy species in densities that may adversely affect the desirable community of plants, as determined by the best professional judgment of a qualified professional.

Compliance with these performance standards will be the responsibility of Boise River Wetlands Trust.



Legend
Approximate Locations:

Existing wetlands
Existing wetlands with restoration potential
Uplands with wetland creation potential

Property boundary

N

Not to Scale

Figure 6 – General Site Plan
Boise River Wetlands Trust
Wetland Bank
Ada County, Idaho

Ecological Design, Inc.
March 16, 2005

Monitoring Plan
All restored and constructed wetlands and buffer areas will be monitored for a three year period - beginning after all full implementation of each phase of the master plan - or until the standards of performance and measures of success are accomplished, which ever occurs first. Monitoring data will include the following: (1) depth to groundwater observed in established bore holes, (2) a complete list of all observed vegetation with particular attention paid to weedy species, (3) an ocular estimate of per cent cover of each observed species within a statistically valid number of quadrats, (4) a description of soil type and condition, and (5) photographs taken from both horizontal and oblique points of view. Monitoring will be accomplished once each year on or around the mid-point of the growing season. Annual reports will be provided to the US Army COE - Walla Walla District.

Adaptive Management Plan
If after a three year period these measures of success are not accomplished, reasons for failure will be determined and corrected. If required, areas will be revegetated by methods and materials described in this document or other methods approved by the US Army COE - Walla Walla District.

PRELIMINARY ADMINISTRATIVE, MANAGEMENT, AND FINANCIAL PLANS
Construction of the Boise River Wetland Bank will be financed by Sundance and operated by Boise River Wetlands Trust. Cornel Larson will serve as the independent administrator of Boise River Wetlands Trust. Sundance will continue to own the project area during construction and after completion of the project.

DOCUMENTATION OF INCORPORATION
To be provided to the US Army COE by Bill McKlveen on or before April 15, 2005.

PROPOSED GEOGRAPHIC SERVICE AREA
The geographic area for which credits will be available at the Boise River Wetland Bank to compensate for unavoidable, adverse impacts to jurisdictional wetlands includes: (1) portions of the Boise River, Payette River, Weiser River, and Snake River drainages, and (2) irrigation and drainage ditches originating from or returning to portions of these waterways. The geographic service area is more fully described below.

Boise River - from its mouth to its source, and all tributaries to the Boise River to their source, including but not limited to: Willow Creek, Big Gulch Creek, Dry Creek, Mores Creek, the South Fork of the Boise River and its tributaries to their source, the North Fork of the Boise River and its tributaries to to the Sawtooth National Recreation Area boundary, and the Middle Fork of the Boise River and its tributaries to the Sawtooth National Recreation Area boundary.

Payette River - from its mouth to its source, and all tributaries to the Payette River to their source, including but not limited to: Little Willow Creek, Big Willow Creek, Squaw Creek, Shafer Creek, Porter Creek, South Fork of the Payette River and its tributaries to its confluence with the Middle Fork of the Payette River, and the North Fork of the Payette River and its tributaries to Payette Lake.

Weiser River - from its mouth to its source, and all tributaries to the Weiser River to their source, including but not limited to: Mann Creek, Crane Creek, Little Weiser River, Pine Creek, Middle Fork Weiser River, Hornet Creek, West Fork Weiser River, and East Fork Weiser River.

Snake River (within the geographic limits of the State of Idaho) - from its confluence with the Weiser River to Glenns Ferry, and all tributaries to these reaches of the Snake River to their source, including but not limited to: Succor Creek, Jump Creek, Squaw Creek, Hardtrigger Creek, Wilson Creek, Sand Creek, Picket Creek, Castle Creek, Rabbit Creek, Bitch Creek, Corder Creek, Virgin Wash, Shoofly Creek, Little Jacks Creek, Bruneau River, Canyon Creek, Rattlesnake Creek, Browns Creek, Bennett Creek, Sailor Creek, Cold Spring Creek, Deaddman Creek, Little Canyon Creek, and Rosevear Gulch.

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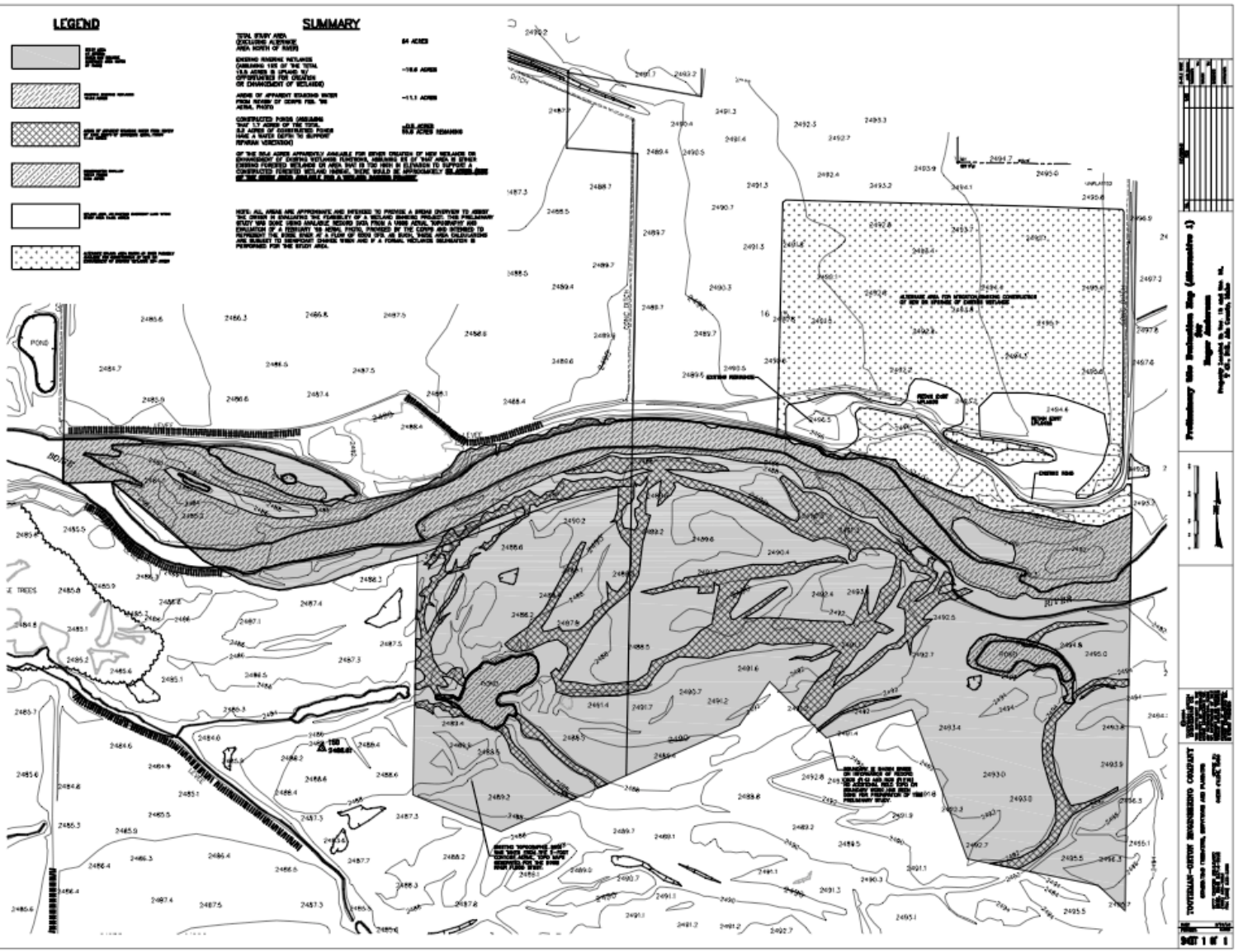
Appendix 1

Topographic Survey Completed by Toothman-Orton Engineering Company for Roger Anderson (2004)


LEGEND
SUMMARY
POND
Preliminary Site Evaluation Map (Alternative 4)
SHEET 1 OF 1

Appendix 2

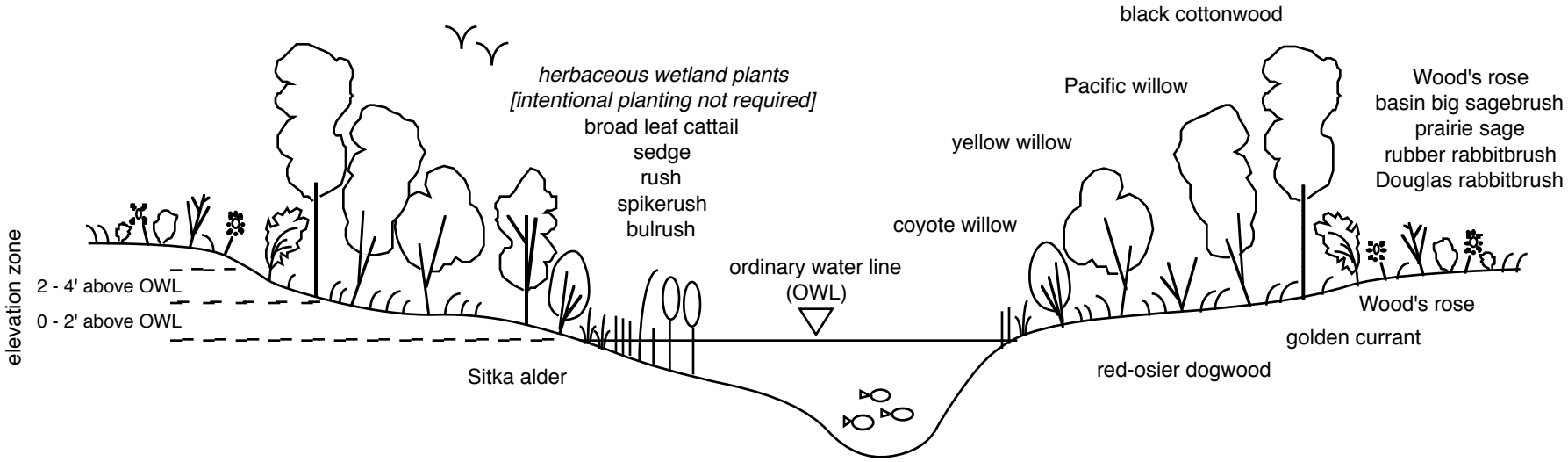
Idaho Department of Fish and Game - Region 3
Prescription for Revegetation of Wetlands, Riparian Areas, and Uplands
Within a Typical Southwest Idaho Stream Corridor

Idaho Department of Fish and Game - Region 3 Prescription for Revegetation of Wetlands, Riparian Areas, and Uplands Within a Typical Southwest Idaho Stream Corridor

Designed by: Ecological Design, Inc.
Robert B. Tiedemann, CFS, CWB
January 1992

Typical Section of a Revegetated Stream Corridor

Principal tree and shrub species are drawn and labeled on this typical section. Principal and occasional tree and shrub species are listed in the plant species list on page 2 of this document .



Note: Not to Scale

The typical section, plant species list, planting rates, and planting methods prescribed by this document are the Idaho Department of Fish and Game - Region 3 minimum standard for revegetation of stream corridors in southwest Idaho. Compliance with this standard will satisfy the requirements of Idaho Department of Fish and Game - Region 3, but not necessarily those of other resource and regulatory agencies. The standard is generally applicable to most situations, however restoration and replication of some stream corridors may require analysis of the site and development of a site specific plan by professionals.

Most plant species prescribed by this standard are native to southwest Idaho. They are best adapted to the environment, provide habitat for both game and nongame fish and wildlife, and complement adjacent naturally occurring landscapes. All species are commercially available from regional vendors. A partial list of regional vendors is provided. A complete, current list is available from the publication *Hortus Northwest - A Pacific Northwest Native Plant Directory and Journal*, PO Box 955, Canby OR 97013, 503 260-7968.

The minimum standard requires planting within the stream corridor all tree and shrub species identified as principal species in the plant species list on page 2 of this document. They are also drawn and labeled on the typical section. All other listed tree and shrub species are occasional species. Athough not required, they may be planted to further enhance fish and wildlife habitat, and provide a greater diversity of visually attractive plants. Occasional species may also be selected for their suitability to mountain, high desert, or valley floor environments. Professionals can provide further guidance.

The minimum standard also requires planting within the stream corridor 3 grass species and 2 wildflower species identified in the plant species list on page 2 of this document. The list includes grasses well adapted to alkali and sandy soils.

The minimum standard does not require intentional planting of herbaceous wetland plants. However, desirable species which naturally colonize a site should be retained and protected.

Idaho Department of Fish and Game - Region 3 Prescription for Revegetation of Wetlands, Riparian Areas, and Uplands Within a Typical Southwest Idaho Stream Corridor

Designed by: Ecological Design, Inc.
Robert B. Tiedemann, CFS, CWB
Janaury, 1992

Plant Species List and Planting Rates

Riparian Trees (planted OWL to 2' above OWL)
•Pacific willow (aka whiplash willow) - Salix lasiandra var. caudata
water birch - Betula occidentalis

Riparian Trees (planted 2' - 4' above OWL)
•black cottonwood - Populus trichocarpa
quaking aspen - Populus tremuloides

Riparian Shrubs (planted OWL to 2' above OWL)
•coyote willow (aka sandbar willow) - Salix exigua var. exigua
•yellow willow - Salix lutea
•red-osier dogwood - Cornus stolonifera (aka Cornus sericia)
•Sitka alder (aka mountain alder) - Alnus sinuata
geyer willow - Salix geyeriana

Riparian Shrubs (planted 2' - 4' above OWL)
•golden currant - Ribes aureum
shrubby cinquefoil - Potentilla fruticosa
Rocky Mountain maple - Acer glabrum
syringa - Philadelphus lewisii
common snowberry - Symphoricarpos albus
saskatoon serviceberry - Amelanchier alnifolia
netleaf hackberry - Celtis reticulata
chokecherry - Prunus virginiana
Douglas hawthorne - Crataegus douglasii
blue elderberry - Sambucus cerulea

Upland Trees (planted > 4' above OWL)
ponderosa pine - Pinus ponderosa
Rocky Mountain juniper - Juniperus scopulorus

Upland Shrubs (planted > 4' above OWL)
•Wood's rose - Rosa woodsii
•basin big sagebrush - Artemesia tridentata ssp. tridentata
•prairie sage - Artemesia ludoviciana (Planting rate: 2 pounds pure live seed / acre)
•rubber rabbitbrush - Chrysothamnus nauseosus
•Douglas rabbitbrush - Chrysothamnus viscidiflorus
oakbrush sumac - Rhus trilobata
mountain lover - Pachistima myrsinites
kinnikinnick - Arctostaphylos uva-ursi
redstem ceanothus - Ceanothus sanguineus
creeping Oregon grape - Mahonia repens (aka Berberis repens)

	Planting rate (pounds pure live seed / acre)
Grasses (planted above OWL) - select 3 species.	
western wheatgrass - Agropyron smithii	5
"Whitmar" bluebunch wheatgrass - Agropyron spicatum	5
"Magnar" basin wildrye - Elymus cinereus	5
"Covar" sheep fescue - Festuca ovina	3
needle and thread - Stipa comata	2
"Canbar" Canby bluegrass - Poa canbi	2
"Garrison" creeping foxtail - Alopecurus arundinaceus	5
Species adapted to sandy soils:	
sand dropseed - Sporobolus cryptandrus	1/2
"Nezpar" Indian ricegrass - Oryzopsis hymenoides	3
Species adapted to alkali soils:	
"Alkar " tall wheatgrass - Agropyron elongatum	5
alkali sacaton - Sporobolus airoides	1/2
Wildflowers (planted > 2' above OWL) - select 2 species.	
"Appar" Lewis flax - Linum lewisii	4
common yarrow - Achillea millefolium	1/2
arrowleaf balsamroot -Balsamorhiza sagittata	1 1/2
goldenrod - Solidago occidentalis	1
Rocky Mountain penstemon - Penstemon strictus	1
Hooker's evening primrose - Oenothera hookeri	2
Indian paintbrush - Castilleja spp.	-
lupine - Lupinus spp.	-
columbine - Aquilegia spp.	-
camas - Camassia spp.	-

Herbaceous Wetland Plants (below OWL)
The following herbaceous wetland plant species will often naturally colonize a disturbed site. Intentional planting is not required by the Idaho Department of Fish and Game - Region 3 minimum standard, but may be accomplished by planting bare root plants, runners, stolons, tubers and seed. Some are commercially available.

broad leaf cattail - Typha latifolia
sedge - Carex spp.
rush - Juncus spp.
spikerush - Eleocharis spp.
bulrush - Scirpus spp.
iris - Iris spp.

Note: All plants shall be true to genus and species. Substitutions are not acceptable. Common names may differ between vendors and may not be the plants in this list.

• Indicates principal tree and shrub species. They *must* be planted. All other listed tree and shrub species are occasional species and *may* be planted.

Idaho Department of Fish and Game - Region 3 Prescription for Revegetation of Wetlands, Riparian Areas, and Uplands Within a Typical Southwest Idaho Stream Corridor

Designed by: Ecological Design, Inc.
Robert B. Tiedemann, CFS, CWB
January 1992

Planting Rates (continued) and Methods

Tree and shrub species are planted at the elevations above the ordinary water line (OWL) shown by the typical section. Principal species are planted at a maximum distance of 5' on-center, occasional species are planted at a density determined by the project proponent and professionals. Principal and occasional species are planted either in a random pattern, with individuals of each species distributed throughout the elevation zone, or in single species blocks distributed throughout the elevation zone.

All trees and shrubs are planted as tubelings or other rooted stock, except prarie sage (*Artemesia ludoviciana*) which is presently available only as seed. Tubelings and other rooted stock are planted between May 1 and June 15, seed is planted between October 1 and November 15.

Tubelings and other rooted stock are planted by pushing a hole in the soil using a dibble or other device. The hole is at least equal in depth and diameter to the below ground portion of the plant. A slow release fertilizer tablet is placed at the bottom of each hole before planting. The tubeling or rooted stock is carefully positioned in the hole without bending the roots and the surrounding soil firmly compacted by hand around each plant.

Grass and wildflower species are planted at the elevations above the OWL shown by the typical section. All grasses and wildflowers are planted as seed, between October 1 and November 15. Seed is drilled at the indicated rate, or broadcast and mechanically raked to insure good contact with the soil. Grass seed is planted at a depth of 1/4" in clayey soils, 1/2" in loamy soils, and 3/4" in sandy soils. Wildflower seed is planted no deeper than 1/4". Wildflowers should be planted separately from grasses to avoid competition. Drilled wildflower and grass seed should be planted in separate rows. Broadcast wildflower and grass seed should be planted in separate blocks.

Topsoil may be placed on the planting bed, but is not normally required. Topsoil may encourage the growth of weedy plant species. Weeds should be physically pulled and removed, rather than treated with herbicides, to best protect fish and desirable plant species. Temporary irrigation water may be required during the period of plant establishment. Permanent irrigation water is required to grow riparian plant species greater than 4' above the OWL. Treatment of the soil surface with fertilizer may encourage the growth of weedy plant species, both on the ground and in the water. It should be avoided.

Partial List of Regional Plant Vendors

Balance Restoration Nursery
PO Box 587
Scottsburg, OR 97473
503 587-4261

Bitterroot Native Growers, Inc.
445 Quast Lane
Corvallis, MT 59828
406 961-4991

Clifty View Nursery
Route 1
Box 509
Bonners Ferry, ID 83805
208 267-7129

Granite Seed
1697 West 2100 North
Lehi, UT 84043
801 768-4422

Native Seed Foundation
Star Route
Moyie Springs, ID 83845
208 267-7938

Northplan Seed Producers
PO Box 9107
Moscow, ID 83843
208 882-8040

Plants of the Wild
PO Box 866
Tekoa, WA 99033
509 284-2848

Porter Lane Wholesale Nursery
PO Box 609
Centerville, UT 84014
801 298-2613
1 800 533-8498

Note: Idaho Department of Fish and Game - Region 3 and Ecological Design, Inc. do not endorse or assure performance of any plant vendor. This list is partial. A complete, current list is available from the publication *Hortus Northwest - A Pacific Northwest Native Plant Directory and Journal*, PO Box 955, Canby OR 97013, 503 260-7968.